

STATUS OF THE CLAIMS SECTION:

Claim 1 (currently amended): A multi-functional admixture for concrete, said multi-functional admixture comprising Component A by 20-84 weight %, Component B by 15-79 weight % and Component C by 0.3-3 weight % such that their total will be 100 weight %, wherein:

said Component A is one or more selected from the group consisting of graft copolymers obtained by a first process and a second process and salts of graft copolymers obtained ~~further~~ by said first process, said second process and a third process;

said first process is for obtaining copolymers with weight-average molecular weight of 10000-50000 by radical polymerization of a mixture of radical polymerizable monomers containing maleic anhydrides and monomers shown by Formula 1 by a total of 95 molar % or more at molar ratio of 50/50-70/30 in the absence of solvent;

said second process is for obtaining graft copolymers by graft reaction of 100 weight parts of said copolymers obtained in said first process with 0.2-4 weight parts of polyether compounds shown by Formula 2;

said third process is for obtaining salts of graft copolymers by partially or completely neutralizing said graft copolymers obtained in said second process with alkali metal hydroxide;

said Component B is polypropyleneglycol monoalkyl ether shown by Formula 3;

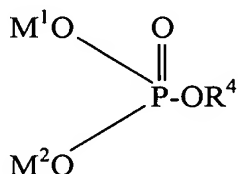
said Component C is organic phosphate shown by Formula 4 or Formula 5;

Formula 1 is given by $\text{CH}_2=\text{CH}-\text{CH}_2-\text{O}-\text{A}^1-\text{O}-\text{R}^1$;

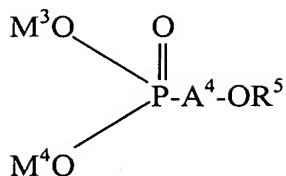
Formula 2 is given by $\text{R}^2-\text{O}-\text{A}^2-\text{OH}$;

Formula 3 is given by $\text{R}^3-\text{O}-\text{A}^3-\text{OH}$;

Formula 4 is given by



Formula 5 is given by



where:

R^1 is methyl group or acetyl group;

R^2 is aliphatic hydrocarbon group with 10-20 carbon atoms;

A^1 is residual group obtained by removing all hydroxyl groups from polyethyleneglycol with polyoxyethylene group having 10-90 oxyethylene units in molecule;

A^2 is residual group obtained by removing all hydroxyl groups from polyalkyleneglycol with polyoxyalkylene group having in molecule a total of 25-60 oxyethylene units and oxypropylene units;

R^3 is alkyl group with 3-5 carbon atoms;

A^3 is residual group obtained by removing all hydroxyl groups from (poly)propyleneglycol with (poly)oxypropylene group having in molecule only 2-4 oxypropylene units;

R^4 and R^5 are each alkyl group with 8-18 carbon atoms;

A^4 is (poly)oxypropylene group with 1-5 oxypropylene units;

M^1 , M^2 , M^3 and M^4 are each hydrogen atom, alkali metal, alkali earth metal, ammonium or organic amine.

Claims 2-9 (canceled).

Claim 10 (previously presented): The multi-functional admixture of claim 1 wherein said Component C is organic phosphate shown by Formula 5 where R^5 is alkyl group with 10-16 carbon atoms and M^3 and M^4 are each alkali metal.

Claim 11 (canceled).

Claim 12 (withdrawn): Concrete comprising 100 weight parts of cement and 0.1-5 weight parts of multi-functional admixture of claim 1.

Claim 13 (withdrawn): Concrete comprising 100 weight parts of cement and 0.1-5 weight parts of multi-functional admixture of claim 6.

Claim 14 (withdrawn): Concrete comprising 100 weight parts of cement and 0.1-5 weight parts of multi-functional admixture of claim 7.

Claim 15 (withdrawn): The concrete of claim 12 which is AE concrete with entrained air content adjusted to be 3-6 volume %.

Claim 16 (withdrawn): The concrete of claim 13 which is AE concrete with entrained air content adjusted to be 3-6 volume %.

Claim 17 (withdrawn): The concrete of claim 14 which is AE concrete with entrained air content adjusted to be 3-6 volume %.